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DLA PIPER US LLP

Appln. No.: 10/618,344  
Response to Notice filed March 23, 2007  
Replying to Notice of Non-Compliant Amendment of  
Feb. 23, 2007

PATENT  
Attorney Docket No. 352000-902001  
Customer No.: 26379

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 12. (canceled)

13. (currently amended) A method for assigning quantization parameters to the groups of blocks of a picture comprising the steps of:

- i. (a) setting the quantization parameters of all groups of blocks of the picture equal to the largest value allowed by the video coding standard;
- ii. (b) scanning said groups of blocks according to a certain scanning order, where the last group of blocks in the scanning order is followed by the first group of blocks;
- iii. (c) determining whether to code the next group of blocks in the said scanning order with the quantization parameter for the group of blocks;
- iv. (d) decrementing the quantization parameter of said group of blocks;
- v. (e) repeating steps (b)-(d) until the sum of the estimates for the number of coding bits of all of said groups of blocks exceeds the targeted number of coding bits,  $B^{TR}$ , for the picture.

14. (original) The method of claim 13, wherein the first,  $Z_0$ , of a number  $Z$  of groups of blocks are quantized with a quantization parameter of  $q$ , and the remaining number,  $Z - Z_0$ , of groups of blocks are quantized with a quantization parameter of  $q+1$ .

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15. **(original)** The method of claim 13, wherein a group of blocks is coded if the following inequality is satisfied:

$$\frac{1}{384} \sum_{j \in \{1, \dots, 6\}} \sum_{(x,y) \in Z^2} |I^{FD}(x,y)|^2 \geq h(q)$$

16. **(original)** The method of claim 13, wherein said repeating step is terminated according to the following equation:

$$\sum_{r \in \{kZ+1, \dots, (k+1)Z\}} U^r(c', q') + \hat{B}_{OY}^r(q') > B^{TR}$$

17. – 23. **(canceled)**

24. **(currently amended)** A method for assigning quantization parameters to the groups of blocks of a picture comprising the steps of:

- (a) setting the quantization parameters of all groups of blocks of the picture equal to the smallest value allowed by the video coding standard;
- (b) scanning said groups of blocks according to a certain scanning order, where the last group of blocks in the scanning order is followed by the first group of blocks;
- (c) determining whether to code the next group of blocks in the said scanning order with the quantization parameter for the group of blocks;
- (d) incrementing the quantization parameter of said group of blocks;
- (e) repeating steps (b)–(d) until the sum of the estimates for the number of coding bits of all of said groups of blocks falls below the targeted number of coding bits,  $B^{TR}$ , for the picture.

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25. **(original)** The method of claim 24, wherein the first,  $Z_0$ , of a number  $Z$  of groups of blocks are quantized with a quantization parameter of  $q$ , and the remaining number,  $Z - Z_0$ , of groups of blocks are quantized with a quantization parameter of  $q-1$ .

26. **(original)** The method of claim 24, wherein a group of blocks is coded if the following inequality is satisfied:

$$\frac{1}{384} \sum_{j \in \{1, \dots, 6\}} \sum_{(x,y) \in g_j^*} |I^{FD}(x,y)|^2 \geq h(q)$$

27. **(original)** The method of claim 24, wherein said repeating step is terminated according to the following equation:

$$\sum_{r \in \{kZ+1, \dots, (k+1)Z\}} U^r(c', q') + \hat{B}_{OV}^r(q') < B^{TR}$$

28. **(new)** The method of claim 14, wherein a group of blocks is coded if the following inequality is satisfied:

$$\frac{1}{384} \sum_{j \in \{1, \dots, 6\}} \sum_{(x,y) \in g_j^*} |I^{FD}(x,y)|^2 \geq h(q)$$

29. **(new)** The method of claim 14, wherein said repeating step is terminated according to the following equation:

$$\sum_{r \in \{kZ+1, \dots, (k+1)Z\}} U^r(c', q') + \hat{B}_{OV}^r(q') > B^{TR}$$

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30. (new) The method of claim 15, wherein said repeating step is terminated according to the following equation:

$$\sum_{r \in \{kZ+1, \dots, (k+1)Z\}} U^r(c^r, q^r) + \hat{B}_{OV}^r(q^r) > B^{TR}$$

31. (new) The method of claim 30, wherein the first,  $Z_0$ , of a number  $Z$  of groups of blocks are quantized with a quantization parameter of  $q$ , and the remaining number,  $Z - Z_0$ , of groups of blocks are quantized with a quantization parameter of  $q+1$ .

32. (new) The method of claim 25, wherein a group of blocks is coded if the following inequality is satisfied:

$$\frac{1}{384} \sum_{j \in \{1, \dots, 6\}} \sum_{(x, y) \in g_j^*} |I^{FD}(x, y)|^L \geq h(q)$$

33. (new) The method of claim 25, wherein said repeating step is terminated according to the following equation:

$$\sum_{r \in \{kZ+1, \dots, (k+1)Z\}} U^r(c^r, q^r) + \hat{B}_{OV}^r(q^r) > B^{TR}$$

34. (new) The method of claim 26, wherein said repeating step is terminated according to the following equation:

$$\sum_{r \in \{kZ+1, \dots, (k+1)Z\}} U^r(c^r, q^r) + \hat{B}_{OV}^r(q^r) > B^{TR}$$

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35. (new) The method of claim 34, wherein the first,  $Z_0$ , of a number  $Z$  of groups of blocks are quantized with a quantization parameter of  $q$ , and the remaining number,  $Z - Z_0$ , of groups of blocks are quantized with a quantization parameter of  $q+1$ .

36. (new) The method of claim 13, wherein a decision to code a group of blocks is made by comparing a feature derived from data of a macroblock against a threshold.

37. (new) The method of claim 36, wherein the feature is an error variance of one or both of a luminance value or a chrominance value of the macroblock.

38. (new) The method of claim 24, wherein a decision to code a group of blocks is made by comparing a feature derived from data of a macroblock against a threshold.

39. (new) The method of claim 38, wherein the feature is an error variance of one or both of a luminance value or a chrominance value of the macroblock.